

ABSTRACT

EARLY DETECTION SYSTEMS OF FLOOD HAZARD THROUGH SHORT MESSAGE SERVICE (SMS) BASED ON MICROCONTROLLER AT89S52

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Been designed and implemented systems to deliver information via a mobile phone-based microcontroller. When the water level exceeds the safe threshold of the sensor will detect the change, and then the microcontroller will automatically send a message to the porter of water that contains water level warning status.

The design of this system using a design method that consists of several stages, namely, (1) Analysis of needs, (2) Design, (3) Implementation of the circuit, (4) Testing equipment, (5) The procedure of testing and, (6) the manufacture of tools. The system is composed of hardware and software. The hardware consists of a sensor probe, the minimum system microcontroller AT89S52 as the controlling input and output circuit, the circuit output LCD display, mobile phones that use GSM networks are used as the sender of the message as a warning sign. Software was using the programming language C.

Output (Vout) sensor depends on the indigo resistance sensor that will be experienced as a change in water level. The output of this sensor will determine the level of the state of the flood level. If the water levels of the first hit the green indicator light will turn on and send an SMS message "alert status", when water levels hit the second the yellow indicator light will turn on and send an SMS message "alert status", when water levels the third hit the red indicator light will turn on and send an SMS message "status harms". Prosentse of ten-time delivery obtained no error messages result. The problem was on the card provider selection in reducing the message delivery failures.

Keywords: Floods, SMS, Microcontroller